Release notes for ENDF/B Development t-002_He_003 evaluation

December 2, 2016

- `fizcon` Errors:

  1. The cross section and an outgoing distribution don't span the same energy region.
     MAT= 225, MF= 3, MT= 2 (1): Diff limits (b)

     ```
     ERROR(S) FOUND IN MAT= 225, MF= 3, MT=  2
         THE MAXIMUM INCIDENT ENERGY OF  3.00000E+06 (EV)
             SHOULD BE GREATER THAN OR EQUAL TO  2.00000E+07
     ```

  2. The cross section and an outgoing distribution don't span the same energy region.
     MAT= 225, MF= 6, MT= 2 (1): Diff limits (a)

     ```
     ERROR(S) FOUND IN MAT= 225, MF= 6, MT=  2
         SECTION DOES NOT SPAN THE SAME ENERGY RANGE AS FILE   3, MT=   2
     ```

  3. The cross section and an outgoing distribution don't span the same energy region.
     MAT= 225, MF= 6, MT= 28 (1): Diff limits (a)

     ```
     ERROR(S) FOUND IN MAT= 225, MF= 6, MT= 28
         SECTION DOES NOT SPAN THE SAME ENERGY RANGE AS FILE   3, MT=  28
     ```

  4. The cross section and an outgoing distribution don't span the same energy region.
     MAT= 225, MF= 6, MT=650 (1): Diff limits (a)

     ```
     ERROR(S) FOUND IN MAT= 225, MF= 6, MT=650
         SECTION DOES NOT SPAN THE SAME ENERGY RANGE AS FILE   3, MT= 650
     ```

- `fudge-4.0` Errors:

  1. There is a gap in the cross section
     reaction label 0: H3 + He3 / Cross section: (Error # 0): Gap in xsect.

     ```
     WARNING: Gap in cross section data from 3.e6 eV to 20. MeV
     ```

  2. Calculated and tabulated Q values disagree.
     reaction label 1: n + H1 + He4 (Error # 0): Q mismatch

     ```
     WARNING: Calculated and tabulated Q-values disagree: 11109744.52423 eV vs 12096140. eV!
     ```

  3. Energy range of data set does not match cross section range
     reaction label 1: n + H1 + He4 / Product: n / Distribution: / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

     ```
     WARNING: Domain doesn't match the cross section domain: (1000.0 -> 20000000.0) vs (100.0 -> 20000000.0)
     ```

  4. Energy range of data set does not match cross section range
     reaction label 1: n + H1 + He4 / Product: H1 / Distribution: / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

     ```
     WARNING: Domain doesn't match the cross section domain: (1000.0 -> 20000000.0) vs (100.0 -> 20000000.0)
     ```

  5. Energy range of data set does not match cross section range
     reaction label 1: n + H1 + He4 / Product: He4 / Distribution: / uncorrelated - energy - XYs2d: (Error # 0): Domain mismatch (a)

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```
WARNING: Domain doesn't match the cross section domain: (1000.0 -> 20000000.0) vs (100.0 -> 20000000.0)
```

6. Calculated and tabulated Q values disagree.
   reaction label 2: H2 + He4 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 13289536.21625328 eV vs 14.321 eV!
```

7. Energy range of data set does not match cross section range
   reaction label 2: H2 + He4 / Product: H2 / Distribution: / angularTwoBody - XYs2d: (Error # 0): Domain mismatch (a)

```
WARNING: Domain doesn't match the cross section domain: (500.0 -> 3000000.0) vs (100.0 -> 20000000.0)
```

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